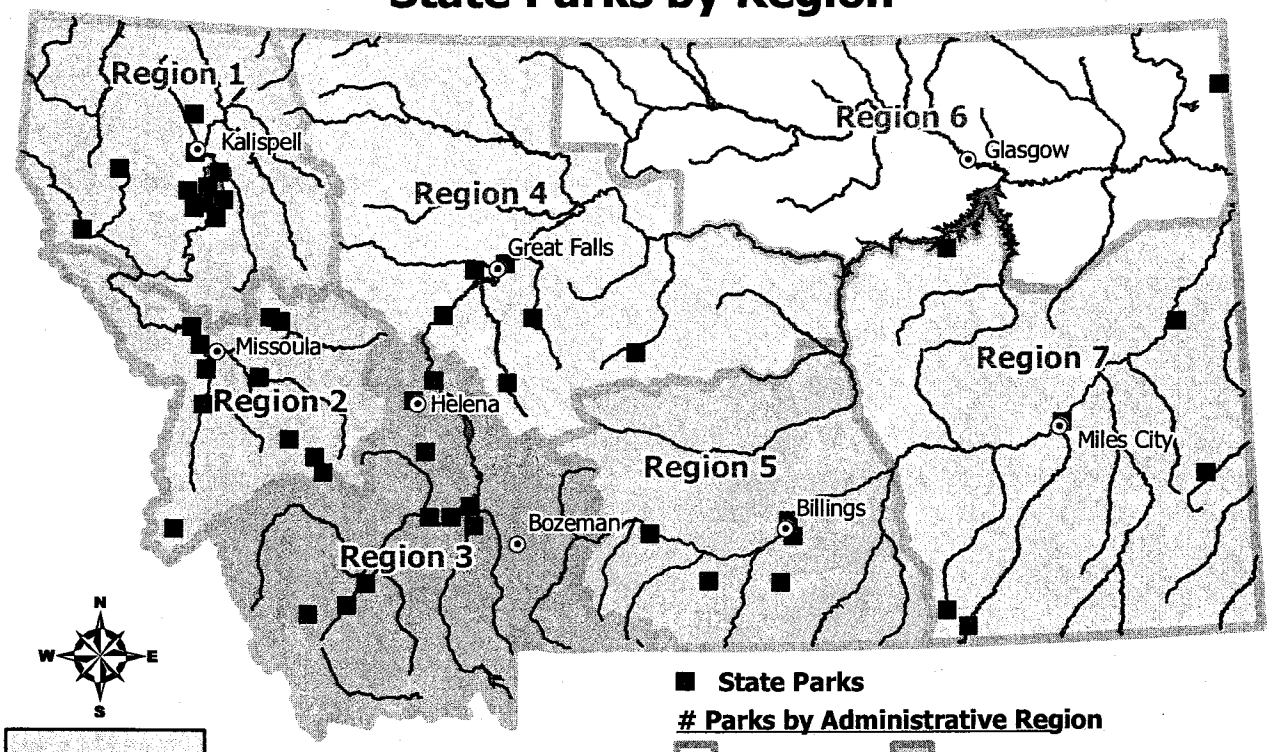
SENATE FISH AND GAME
EXHIBIT NO. 1
DATE 1-30-07
BILL NO. SB 2

State Parks by Region



MONTANA STATE PARKS

ISR07 #2992 - LB - 1/5/07

Region 1 (Kalispell)
West Shore
Big Arm
Yellow Bay
Whitefish Lake
Wayfarers
Thompson Falls
Lone Pine
Logan
Lake Mary Ronan
Finley Point
Wild Horse Island

Region 2 (Missoula)
Anaconda Smoke Stack
Lost Creek
Travelers' Rest
Salmon Lake
Placid Lake
Painted Rocks
Granite Ghost Town
Frenchtown Pond
Fort Owen
Beavertail Hill
Council Grove

Region 3 (Bozeman)
Black Sandy
Bannack
Clark's Lookout
Elkhorn
Lewis & Clark Caverns
Madison Buffalo Jump
Missouri Headwaters
Parker Homestead
Spring Meadow Lake
Beaverhead Rock

Region 4 (Great Falls)
Tower Rock
Ulm Pishkun
Smith River
Sluice Boxes
Giant Springs
Ackley Lake

Region 5 (Billings)
Cooney
Greycliff Prairie Dog Town
Lake Elmo
Pictograph Cave
Chief Plenty Coups

Region 6 (Glasgow)
Brush Lake

Region 7 (Miles City)
Tongue River Reservoir
Hell Creek
Makoshika
Medicine Rocks
Pirogue Island
Rosebud Battlefield

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December 28, 2006

Senator Sam Kitzenberg
540 Broadway, Basement
Helena, MT 59602

Dear Sam,

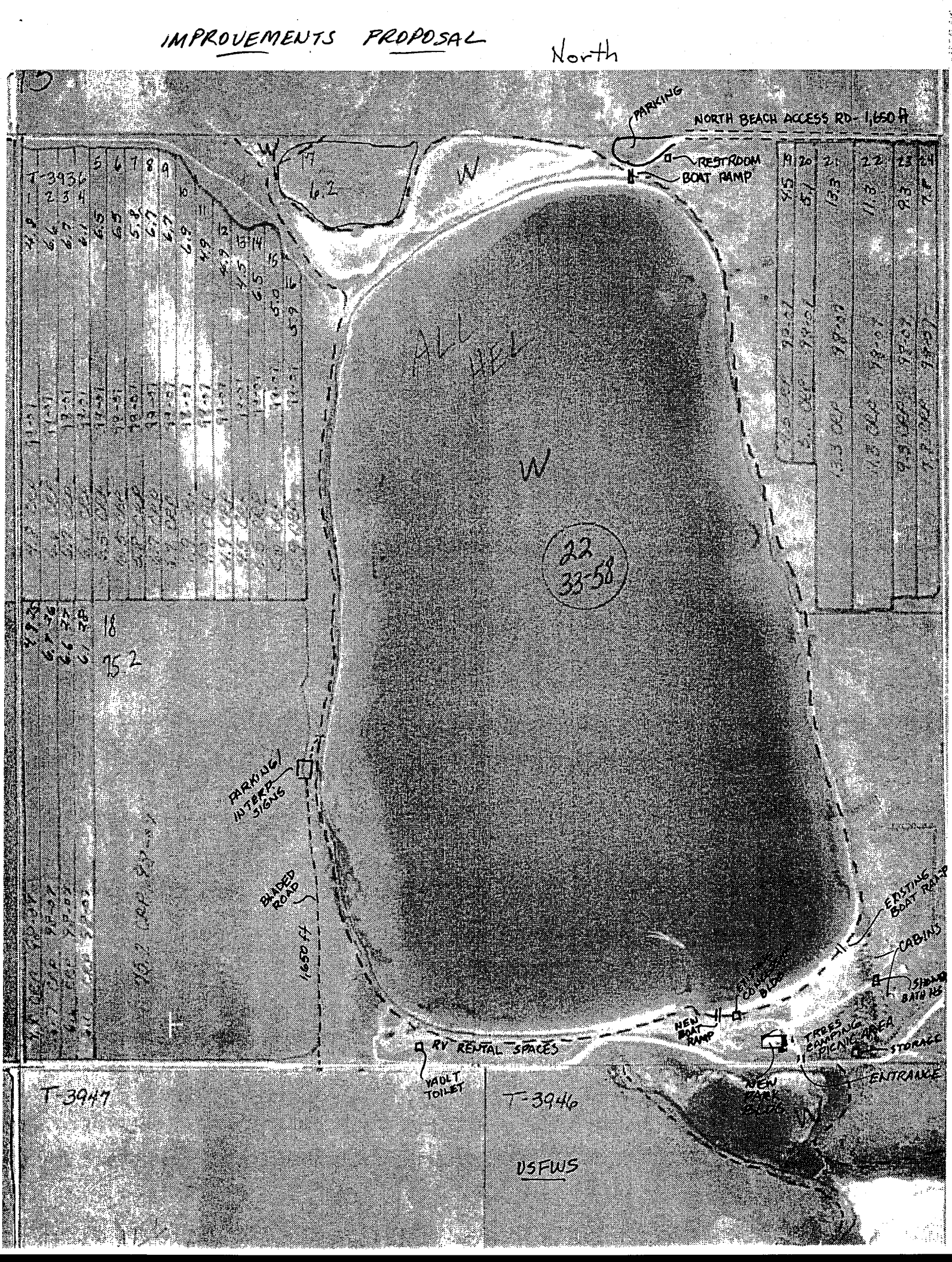
Here's some of the better stuff I have on Brush Lake that is sort of condensed and available. Without that south end Brush Lake isn't much of a state park since there is no shelter, no camping or RV parking, no public use building, or no potable water. The south end was selected for a resort in the '20s because it has a half mile of white sand beach, a wide area to develop facilities and provide parking and trees. The north end has 100 yards of narrow beach and is suitable for day use only. The only other, and best, beach is owned by Cybulski. The rest of the Jensen property acquired by FWP includes steep rocky shorelines or exposed upland fields that have been replanted to grass that do not provide suitable sites for the needed additional improvements.

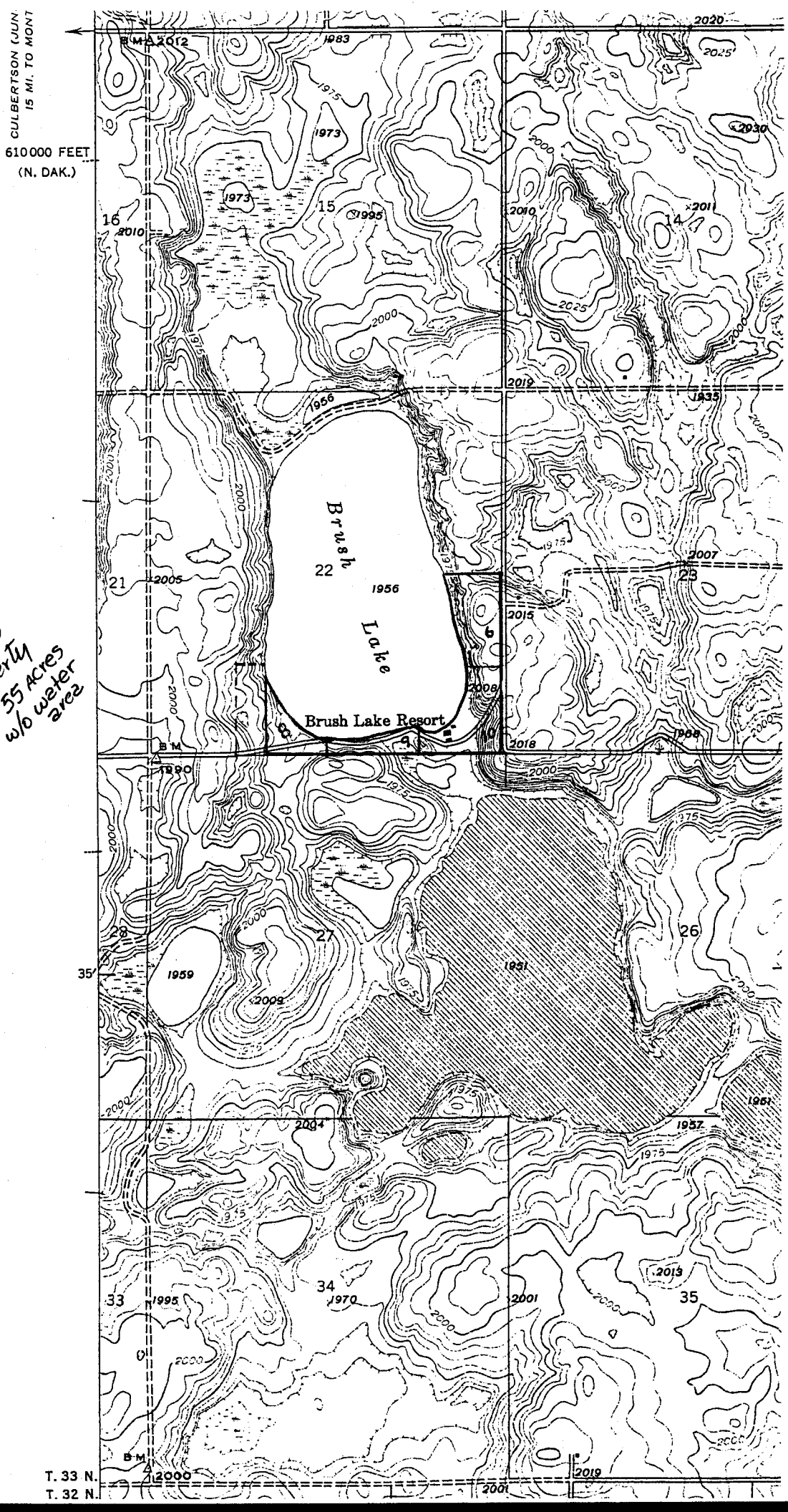
As a regional tourism board member I am reluctant to promote this site as a state park because it does not deliver the amenities most tourists expect in a state park.

Sam, please let me know what else I can do to further your efforts in this regard.

Sincerely,

Doug Smith


IMPROVEMENTS PROPOSAL
North
PARKING
NORTH BEACH ACCESS RD- 1,650 ft
RESTROOM
BOAT RAMP
W
ALL WL
W
22
33-58
PARKING INTERP. SIGNS
GRADED ROAD
1,650 ft
EXISTING BOAT RAMP
CABINS
SHOWER BATH HS
EXISTING CO LODGE & LDG
NEW BOAT RAMP
RV RENTAL SPACES
TREES CAMPING PICNIC AREA
STORAGE
ENTRANCE
VAULT TOILET
NEW PARK BLDG
T-3947
T-3946
USFWS


CULBERTSON (JUN.
15 MI. TO MONT
610000 FEET
(N. DAK.)
Brush
Lake
Brush Lake Resort
Cybulski's
Property
@ 55 Acres
w/o water
area
T. 33 N.
T. 32 N.

Testimony in support of Senate Joint Resolution 15 - Doug Smith, Plentywood, MT

My name is Doug Smith and I work as a planner for Sheridan County. In addition, I am president of Missouri River Country, the eight county tourism region for northeast Montana and that tourism region is the poorest in Montana. In large part that lack of tourism bed tax revenue is due to a lack of tourism infrastructure such as state parks, or fishing access sites or recreation facilities on federal lands.

The Montana Department of Fish, Wildlife and Parks is to be commended for trying to overcome the lack of a state park in Region 6. In 2001 Fish Wildlife and Parks formed a Region 6 State Parks Search Committee. This committee, of which I was a member, was in existence for 8 months, we held seven meetings and conducted four field trips looking at potential state park properties from Havre on the west to the North Dakota border on the east. In our search committee report we recommended that the State look at four potential state parks including Brush Lake. (The other three recommended sites were Fort Assinniboine at Havre, Azure Cave in the Little Rockies, and an Imax theater at Fort Peck Dam.)

Brush Lake is a recreation area that has been used since the area was homesteaded 80 or 90 years ago. It was a popular summer recreation area in the 20's and 30's when the lake would be ringed with cars and picnicers. In the 40's and 50's it had a tavern and dance pavilion built out over the water. In the 1960's the resort area on the south end was donated to be used as a church summer camp. With the area's declining population the church camp was sold to a private owner in the 1980's, and that person couldn't make it go and resold it to the present owner, and that owner has been unable to keep it open for public use. The entire lakeshore is owned by two property owners and with the developed south end closed the public uses the north end which has no restrooms or facilities of any kind. People using the north end are basically trespassing on private property – and if the owners did give permission then they might be liable if injury or accidents occurred. That question of liability has prevented local groups from finding a local solution to keeping the lake open for public use, and state park designation appears to be the only remaining solution available to keep this recreation area available for public enjoyment.

Even though fish can't survive in Brush Lake it is a beautiful lake for swimming and boating. It is a mile long and over a half mile wide, covering 280 acres in an oval shape fitting just inside of a square mile section of land (see attached map). It is spring fed and up to 60 feet deep, it has sand beaches and bottom on the north and south shore swimming areas, there are no obstructions for boating or conflicts with fishing, and the water is fresh and clear year-round.

Actually the lake is heavily mineralized with calcium, magnesium and sodium sulfate, and it has that light blue color of tropical ocean water. Algae and cyanobacteria extract nutrients from the mineral rich water and end up depositing the magnesium and calcium carbonates in reefs of dolomite limestone which are found on the east and west sides in relatively shallow water at 4 or 5 feet. Around the large spring inlets in 30 or 40 feet of

water, there are 6 foot high hollow cones of minerals built up. The minerals that aren't deposited by the micro-organisms end up draining into White Lake to the south where the water is evaporated away leaving large deposits of sodium sulfate, or alkali. So the water level of Brush Lake and the mineral balance in the water is maintained in a stable balance.

This lake is thought to have formed as a result of continental glaciers which receded from this area 12,000 years ago. The lake was originally 100 feet deep but in the 10,000 or so years since the lake was formed – 45 feet of sediments have accumulated on the lake bottom leaving a 60 foot depth for the lake. Since the Brush Lake has no streams running in or running out there is no heavy sedimentation, and the bottom muds have accumulated just from what is filtered out of the water or what is blown in on the wind. These sediments provide an annual record of climate reaching back 10 or 12 thousand years – much like tree rings. A collaboration of scientists extracted a sediment core from the lake in 1999 and are returning in February 2003 to take more sediment samples. The scientists, from Duke University, West Virginia University and the Illinois State Museum, have received funding from the National Science Foundation to continue their research on the climate history of the northern Great Plains. By analyzing the minerals, microorganisms and pollen they can get a good idea of the climate from a specific layer of sediment in the core samples.

Along with being a regional recreation area Brush Lake provides a unique, one-of-a-kind source for scientific research and information – and that in turn provides a wealth of interpretive possibilities for a state park. The existing recreation area has trees, cabins, showers, a boat ramp and picnic area, and the lake itself requires no maintenance. There is no summer home development, yet, which could upset the natural chemical balance of the lake. If the state is serious about putting a state park in Region 6 we think we have the perfect candidate in Brush Lake. We would like to see some improvements made there but basically it already has what is needed for a state park and all that would be needed is to change the lock on the gate. Once acquired we think the gate fees would pay for the annual maintenance and staffing for this park.

In summary, northeast Montana desperately needs the development of any tourism infrastructure and designating Brush Lake for a state park will preserve this natural jewel for all residents of the Treasure State to enjoy.

Region 6
State Parks Search Committee
(2001-2002)

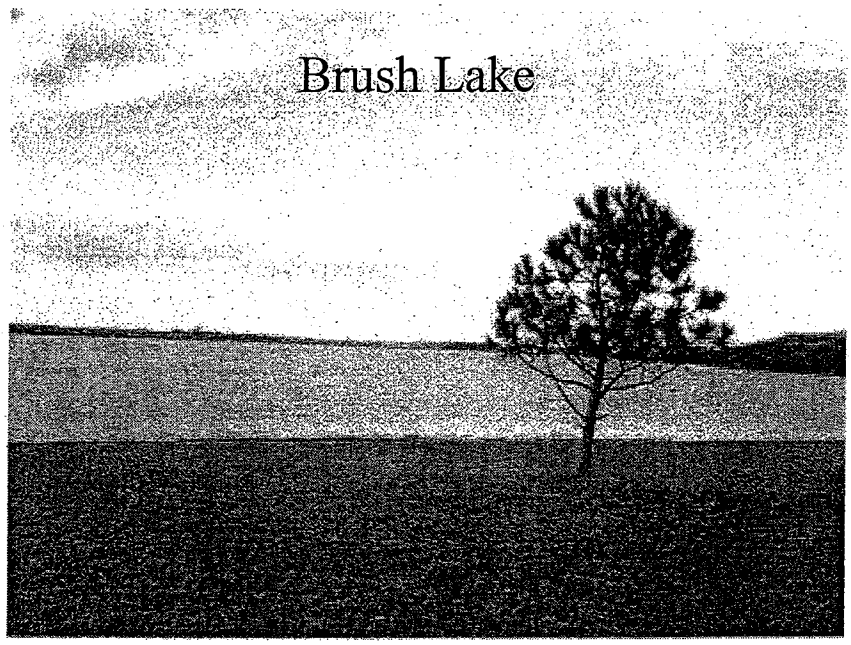
Final Recommendations

Development of a Regional State Parks Program

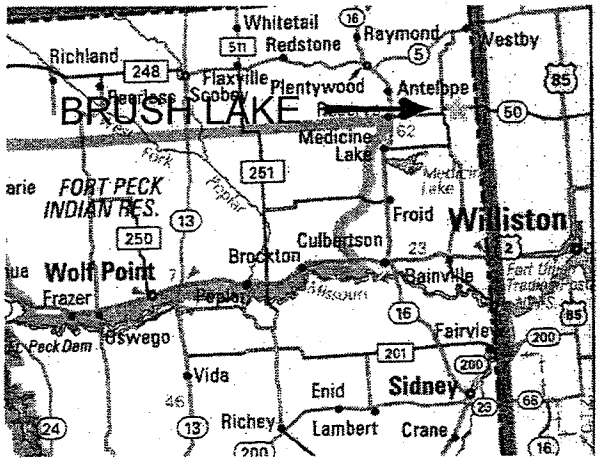
Submitted by:
Region Six State Parks Search Committee
and
Montana Fish, Wildlife & Parks
R-6 Parks Division
Glasgow, Montana

July 1, 2002

Brush Lake



- Location: Approximately 31 road miles southeast of Plentywood, MT, and 5 miles east of Dagmar, MT.
  Legal Description: All of Section 22, T33N, R58E in Sheridan County



- Proposed site would include the entire scope of Brush Lake, and all land around the perimeter of the lake that is within Section 22.

- Approximate size: 640 acres (presently, 360 acres in deeded land and 280 acres of lake water)

- Current Property Owners: Marie Jensen - 305.94 acres
  David Cybulski - 54.68 acres

- Estimated Property Acquisition Costs:
  The most expedient method of acquisition would be outright purchase of the property. The following are estimated comparable market value costs:

Jensen	- 305.94 acres @ $350/acre =	$107,079
Cybulski	- 54.68 acres @ $500/acre =	27,340
Plus Bldg./improvements – taxable value @ $11,550 @ 300% =		34,650
	TOTAL =	$169,069

- Access: The main recreation area on the south end of the lake is two miles from paved Secondary Highway 258. Section 22 is bordered on the west, south and east sides by public roads maintained by Sheridan County.

- Partnerships: - Volunteer assistance with "Friends of Brush Lake"
  - Prairie restoration projects with U.S. Fish & Wildlife Service, Natural Resources Conservation Services and Montana Native Plant Society

In its "hey-days" of the 1920's, 30's and 40's, Brush Lake would attract thousands of enthusiastic visitors, from various communities of northeastern Montana and northwestern North Dakota. Besides the attraction of the clear, clean water of the lake, there were facilities for lodging, dining and dancing on the lake's perimeter. It was the place for relaxation and socializing. Through time, the buildings of that era were either accidentally burned or taken down.

In recent years, the lake's water attracts users of motor boat, personal watercraft, sailboats, and canoes. Due to the chemical composition of the water, there are no fish in the lake. Therefore, the lake has the unique recreational setting of eliminating the possibility of conflicts between anglers and boat users. Much of the shoreline of Brush Lake is lined with a fine sand, consequently is a very popular body of water for people to swim, or simply to 'cool down' on a hot summer day.

The majority of the visitation on the lake shoreline is found in two locations, the north end and the south end. On the south end of the lake is a commercial endeavor that includes 12 cabins, a bathhouse, and a restaurant. At this time, the cabins are in need of repair, and not being rented Whereas, the bathhouse is operable and the restaurant which serves sandwiches and soda pop, operates on an unpredictable schedule. This end of the lake presently provides the public with camping and picnic pads, and a concrete boat ramp. The concession charges visitors to use this area.

The north end of the lake can be reached by vehicle on a dirt trail. This part of the lake's shoreline has no facilities and does not have commercial presence. The visitation in this area consist of folks who wish to camp, picnic, swim and boat in a more primitive/undeveloped area, where no fees are charged. This area does not have any scheduled maintenance or bathroom facilities, thus the area is often littered with trash, and human waste. Occasionally, local groups or a Good Samaritan will clean up the area.

Presently, the Jensen family, the landowner of the land on the north two-thirds of the lake, does not stop or limit folks from 'trespassing' on their land. Whereas, Cybulski, the landowner of the land on the south one-third of the lake, allows controlled recreational use, which is managed by the family that runs the concession. The concession operation leases the land and facilities from Cybulski.

The majority of recreationists to Brush Lake come from the surrounding towns of Plentywood, Scobey and Culbertson, Montana, and Grenora and Williston, North Dakota. For most of these towns, Brush Lake is the closest body of water and in some cases, the only body of water where the local public can enjoy types of recreation this lake offers.

Search Committee member Doug Smith of Dagmar, Montana introduced the Committee to Brush Lake. Doug was born and raised on a farm not too far from the lake, and has the desire and passion to protect Brush Lake from future commercial summer home development, degradation of the water quality and from the potential loss of the short grass prairie environment. He personally knows both of the landowners, Jensen and Cybulski, and is aware that they are commonly approached by people wishing to buy the property on Brush Lake.

Although Doug sees the urgency to protect the lake, he realizes the recreational significance this lake provides to the people from this part of northeastern Montana. Therefore, he considers that by making the area a Montana state park, the natural features of the area, along with the current recreation opportunities, will be protected.

Doug provided the Search Committee with a well thought out vision for the development and management of a state park on Brush Lake. The following is Doug proposal, with the realization that if the area does become a state park that adjustments would be made:

OPEARATIONS/PERSONNEL COSTS

It is assumed that one full-time park manager, and one part-time or volunteer assistant, would be needed during the 6-month recreation season. A food, beverage and sports equipment rental concession would be leased to a private operator. The park manager, assistant and/or volunteers could provide routine maintenance and cabin/facilities rehabilitation during low use periods.

Operation costs would include electrical, waste disposal, sewage pumping services, phone service and maintenance costs:

Electricity @ $250/mo.	$250
Waste Disposal Services $42/unit/mo.	$130
Vault Toilet Pumping @ $100/mo.	$100
Telephone/Internet @ $120/mo.	$120
Maintenance/Materials @ $600/mo.	$600
TOTAL	$1,200/mo x 6 mos. = $7,200

PROPOSED IMPROVEMENTS

The following list of improvements are suggestions provided by a local "Friends of Brush Lake" committee. Proposed improvements would need to be reviewed, designed and budgeted by FWP staff following initial site acquisition.

Proposed Improvement	Estimated Cost
North Beach Access	
Road improvements - 1,650 linear feet	$10,000
Parking area	2,000
Boat ramp	30,000
Vault toilet	8,000
West Side Access	
Interpretive signs @ $11,000 x 2 ea. =	22,000
Parking area	1,000
Blade road @ 1,650 feet	2,000
Demolish existing cabin/outbuildings (one match?)	
South End Recreation Area	
Boat Ramp	30,000
Campsites (5) w/table, pad, fire ring @ $250 ea.	1,250
Day use picnic area (2 tables) @ $100 ea.	200
Cottonwood trees - 50 @ $5 ea.	250
Vault toilet	8,000
Park Office/Community Bldg. (28' x 80') @ $20/sf	44,800
RV spaces w/electrical (12 ea.) @ $300	3,600
Prairie Restoration	
245 acres CRP	
TOTAL IMPROVEMENTS	$170,300

Improvements Summary - Proposed improvements on the north end (North Beach Area) include developing a built-up roadway and level parking area, boat ramp, vault toilet and waste disposal receptacles.

On the west side (West Side Access), improving the access road and leveling a parking area/turn around to provide access to a swimming/nature study area, free of motorized boats and to access the shallow offshore reef. Includes installation of two interpretive panels to show glacial geology and hydrology, and lake biochemistry, which is unique to this lake.

On the south end (South End Recreation Area), the currently developed primary use area: maintain and rehabilitate the bathhouse/shower facility and fix up the 12 cabins for rentals; install a new boat ramp further away from swimming beach area; install 5 camping spaces and a day-use picnic area, plant 50 cottonwood trees in the camping/picnic area to replace those lost to beavers; construct a 28' x 80' building to house a park office, concessions, public information and a group activity/meeting room;

move existing concession building off the beach and rehab for park residence; install 12 RV electrical hookups and vault toilet on the west side of the south beach.

Prairie restoration would be a long-term on-going process to be developed in cooperation with NRCS and USFWS objectives and funding.

a treasure state gem

Brush Lake

Brush Lake

RICK AND SUSIE GRAETZ PHOTO

Aside from its distinctive aquamarine blue color, Brush Lake looks like many other lakes that dot this prairie pothole region, however beneath its surface the lake is full of superlatives. The lake's depth, chemistry, biology and hydrology all stand alone in making this a unique body of water.

For millions of years, before the last ice age, the Missouri River's valley turned north just east of Poplar and the river flowed northeast to Hudsons Bay, joining the Yellowstone River valley just north of the international boundary in Saskatchewan.

In the last glacial epoch the continental ice sheets spread south grinding up the Canadian Shield and carrying it south to cover the northern portion of Montana and filling in the old river valleys. First the river valleys were filled with lake bottom clays from the dammed up rivers, then glacial till when the glaciers arrived, and finally with outwash sand and gravels when the ice retreated. Even as the ice front retreated north it continued to send tongues of ice down the old valley depression, and it left a great block of ice a mile long, a half mile wide and hundreds of feet thick where Brush Lake now sets. The melting ice front continued to wash down great volumes of sand and gravel to bury the ice block in place. Eventually a spruce forest grew over the slowly melting ice block, until it melted completely, sending a tangle of trees to the bottom of a 100 foot deep lake.

The buried outwash gravels and the deeper river terrace gravels are very porous and support a controlled groundwater irrigation area, as well as supplying Brush Lake with a continuous flow of water through large springs in the lake. Being in a closed basin, summer evaporation serves as a pump to keep groundwater flowing into the lake. And since evaporation only takes pure water out, the minerals leached from the glacial gravels remain dissolved in the lake and accumulate, giving the lake its distinct color. Certain algae and bacteria thrive in this flow of mineral rich water and they take what they need to grow and deposit the calcium and magnesium carbonates (limestone) in the form of cones, florets, and reefs on lake bottom. Brush Lake's symbiotic twin is White Lake to the south. It is 4 to 6 feet lower and essentially an evaporation pan for the excess water seeping out of Brush Lake. White Lake is where all the sodium sulfate (alkali) comes out of solution and is deposited. The mineral laden water inflow, offsite evaporation and biotic action keeps Brush Lake's water clear and fresh year round. It is one of the few

lakes in the world where this dynamic process is found.

Being a deep lake (65 feet) in a closed basin, Brush Lake contains a sediment record of value to the scientific study of climate change. Since it first saw daylight 10,000 years ago, Brush Lake has accumulated 45 feet of sediments. Much like tree rings the lake annually deposits a layer of light and dark sediment which can be used to construct a time line. These layers contain pollen and distinct minerals which allow scientists to determine variations in climate since the ice age. Currently sediment cores are being studied by a collaborative team of scientists who are funded by a National Science Foundation grant. In a few years we should have a better understanding of how climate change has shaped this area of the northern Great Plains.

Over the years attempts have been made to stock the lake with fish, but with no success. It is theorized that all the oxygen in the groundwater is tied up in dissolving the calcium rich gravels resulting in poorly oxygenated lake water. In addition, Brush Lake's water may be more similar to sea water than fresh water, making it tough for traditional sport fish to survive. That is not all bad, since Brush Lake is being developed as a water recreation area there will be no conflicts between motorboats and fishermen, and no need to worry about stepping on a fish-hook when jumping in for a swim. The Department of Fish Wildlife and Parks has let the contract for construction of improvements for this State Park and expects that construction will be completed by July, just in time for the summer recreation season when the lake warms up just enough to make it refreshing on a hot summer day.